

Australian/New Zealand Standard™

**Safety of toys**

**Part 3: Migration of certain elements**

### **AS/NZS ISO 8124.3:2003**

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee CS-018, Safety of Children's Toys. It was approved on behalf of the Council of Standards Australia on 14 April 2003 and on behalf of the Council of Standards New Zealand on 8 May 2003. It was published on 23 May 2003.

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# Australian/New Zealand Standard™

## Safety of toys

### Part 3: Migration of certain elements

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## PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee CS-018, Safety of Children's Toys. It is identical with and has been reproduced from ISO 8124-3:1997, *Safety of toys, Part 3: Migration of certain elements*.

The objective of this Standard is to provide toxicity requirements for toys and toxicity labelling requirements for certain materials used in toys.

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- (a) Its number appears on the cover and title page while the International Standard number appears only on the cover.
- (b) In Clause 1.1 of the source text, insert the word 'only' before the word 'specific'.
- (c) In the source text, 'this part of ISO 8124' should read 'this Australian/New Zealand Standard'.
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References to international Standards should be replaced by Australian, New Zealand or Australian/New Zealand Standards, as follows:

<i>Reference to International Standard or other publication</i>		<i>Australian/New Zealand Standard</i>	
ISO		AS/NZS ISO	
8124	Safety of toys	8124	Safety of toys
8124-1	Part 1: Mechanical and physical properties	8124.1	Part 1: Safety aspects related to mechanical and physical properties (ISO 8124-1:2000, MOD)
3696	Water for analytical laboratory use— Specification and test methods	—	—

The terms 'normative' and 'informative' have been used in this Standard to define the application of the annex or appendix to which they apply. A 'normative' annex or appendix is an integral part of a Standard, whereas an 'informative' annex or appendix is only for information and guidance.

## CONTENTS

*Page*

1	Scope .....	1
2	Normative references .....	2
3	Definitions.....	2
4	Maximum acceptable levels.....	2
5	Principle.....	3
6	Reagents and apparatus .....	3
7	Selection of test portions.....	4
8	Preparation and extraction of test portions .....	5
9	Detection limits of quantitative elemental analysis.....	11
10	Test report .....	11
Annexes		
A	Determination of acidity of 1,1,1-trichloroethane.....	13
B	Sieve requirements.....	14
C	Selection of procedure .....	15
D	Background and rationale.....	16
E	Bibliography.....	21

## INTRODUCTION

The requirements of this part of ISO 8124 are based on the bioavailability of certain elements resulting from the use of toys and should not, as an objective, exceed the following levels per day:

- 1,4 µg for antimony<sup>1)</sup>;
- 0,1 µg for arsenic;
- 25,0 µg for barium;
- 0,6 µg for cadmium;
- 0,3 µg for chromium;
- 0,7 µg for lead;
- 0,5 µg for mercury;
- 5,0 µg for selenium.

For the interpretation of these values it has been necessary to identify an upper limit for the ingestion of toy material. Very limited data have been available for identifying this upper limit. As a working hypothesis, a summed average daily intake of the various toy materials has been gauged at the currently accepted value of 8 mg/d, being aware that in certain individual cases these values might be exceeded.

Combining the daily intake with the bioavailability values listed above, limits are obtained for various toxic elements in micrograms per gram of toy material (milligrams per kilogram) and are detailed in table 1. The values obtained have been adjusted to minimize children's exposure to toxic elements in toys and to ensure analytical feasibility, taking into account limits achievable under current manufacturing conditions (see annex D).

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1) This level differs from the level of 0,2 µg given in EN 71-3:1994.

## AUSTRALIAN/NEW ZEALAND STANDARD

### Safety of toys

#### Part 3: Migration of certain elements

##### 1 Scope

**1.1** This part of ISO 8124 specifies maximum acceptable levels and methods of sampling and extraction prior to analysis for the migration of the elements antimony, arsenic, barium, cadmium, chromium, lead, mercury and selenium from toy materials and from parts of toys, except materials not accessible (see ISO 8124-1).

**1.2** Maximum acceptable levels are specified for the migration of the elements listed in 1.1 from the following toy materials:

- coatings of paints, varnishes, lacquers, printing inks, polymers and similar coatings (see 8.1);
- polymeric and similar materials, including laminates, whether textile-reinforced or not, but excluding other textiles (see 8.2);
- paper and paper board, up to a maximum mass per unit area of 400 g/m<sup>2</sup> (see 8.3);
- natural or synthetic textiles (see 8.4);
- glass/ceramic/metallic materials, excepting lead solder when used for electrical connections (see 8.5);
- other materials, whether mass-coloured or not (e.g. wood, fibreboard, hardboard, bone and leather) (see 8.6);
- materials intended to leave a trace (e.g. the graphite materials in pencils and liquid ink in pens) (see 8.7);
- pliable modelling materials, including modelling clays, and gels (see 8.8);
- paints to be used as such in the toy, including finger paints, varnishes, lacquers, glazing powders and similar materials in solid or liquid form (see 8.9).

**1.3** For the purposes of this part of ISO 8124, the following criteria are considered appropriate in the categorization of toys which can be sucked, licked or swallowed:

- all intended food/oral contact toys, cosmetic toys and writing instruments categorized as toys;
- toys intended for children up to six years of age, i.e. all accessible parts and components where there is a probability that those parts or components may come into contact with the mouth (see annex D).

Toys and parts of toys which, due to their accessibility, function, mass, size or other characteristics, obviously exclude any hazard due to sucking, licking or swallowing, bearing in mind the normal and foreseeable behaviour of children, are not covered by this part of ISO 8124.



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